

IMPLANTABLE MEDICAL ELECTRICAL STIMULATION LEAD FIXATION METHOD AND APPARATUS

ABSTRACT OF THE DISCLOSURE

- 5 An implantable medical electrical lead particularly for stimulation of the sacral nerves comprises a lead body extending between a distal end and a proximal end, and the distal end having at least one electrode of an electrode array extending longitudinally from the distal end toward the proximal end. The lead body at its proximal end may be coupled to a pulse generator, additional intermediate wiring, or other stimulation device.
- 10 A fixation mechanism is formed on or integrally with the lead body proximal to the electrode array that is adapted to be implanted in and engage subcutaneous tissue, particularly muscle tissue, to inhibit axial movement of the lead body and dislodgement of the stimulation electrodes. The fixation mechanism comprises a M tine elements arrayed in a tine element array along a segment of the lead proximal to the stimulation
- 15 electrode array. Each tine element comprises at least N flexible, pliant, tines, each tine having a tine width and thickness and extending through a tine length from an attached tine end to a free tine end. The attached tine end is attached to the lead body from a tine attachment site and supports the tine extending outwardly of the lead body and proximally toward the lead proximal end. The M x N tines are adapted to be folded
- 20 inward against the lead body when fitted into and constrained by the lumen of an introducer such that the tine free ends of more distal tines of more distal tine elements are urged toward or alongside the attached tine ends of the adjacent more proximal tines of more proximal tine elements, and the folded tines do not overlap one another.